

What is claimed is:

1. A system that places a label on a bag, comprising:

a first plurality of rollers contacting a bag film

5 comprising a plurality of bags, each of the bags delimited by a perforation, said first plurality of rollers defining an area through which the bag film is conveyed, and rotating in concert in a first direction to convey the bag film, at least one of
10 said plurality of rollers being driven to convey the bag film;

a printer for printing a plurality of labels disposed on a backing material;

a second plurality of rollers contacting the plurality
15 of labels and the backing material, said second plurality of rollers defining an area through which the plurality of labels and the backing material are conveyed, and rotating in concert to convey the plurality of labels and the backing material for
20 indicia to be printed thereon; and

a label removal and tamp mechanism that receives at least one printed label, selectively removes the printed label from the backing material and places the printed label on the bag.

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2. The system according to claim 1, further comprising
a first sensor for determining a first position of the
bag, wherein said tamp places the printed label on the
bag responsive to the first position determined by said
5 first sensor.

3. The system according to claim 1, further comprising:
at least one bag opening mechanism movably mounted to
open the bag subsequent to labeling; and
10 a seal bar assembly comprising a heater element and a
seal bar to seal the bag.

4. The system according to claim 3, wherein said at
least one bag opening mechanism comprises a second sensor
15 to determine whether the bag is in position for opening.

5. The system according to claim 3, further comprising
a third sensor for detecting a position of a perforation
between the bag and a second bag.

20 6. The system according to claim 5, wherein the
perforation position is used to convey the bag a
predetermined amount in the first direction to said seal
bar assembly.

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7. The system according to claim 3, wherein said seal bar moves toward the bag to seal the bag.

8. The system according to claim 3, wherein at least a
5 portion of said first plurality of rollers rotates in a second direction subsequent to sealing the bag to break a perforation between the bag and a second bag.

9. The system according to claim 1, further comprising
10 a third roller that separates at least one of the plurality of labels from the backing material when the backing material rotates about said third roller.

10. The system according to claim 9, wherein a surface
15 of said tamp comprises a plurality of vacuum holes that facilitate maintaining the label on the surface prior to placing the printed label on the bag.

11. The system according to claim 1, wherein a surface
20 of said tamp comprises a plurality of vacuum holes that facilitate maintaining the label on the surface prior to placing the printed label on the bag.

12. The system according to claim 1, wherein at least one of said second plurality of rollers is under a biasing force and moves dynamically as labels are received by said printer.

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13. The system according to claim 12, further comprising a spring, said spring providing the biasing force.

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14. The system according to claim 12, further comprising a cam that moves in concert with the at least one of said second plurality of rollers under the biasing force.

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15. The system according to claim 12, further comprising a switch that is engaged by said cam, wherein one of said second plurality of rollers comprises a label roll, and wherein when said switch is engaged by said cam, labels are dispensed from said label roll.

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16. The system according to claim 3, wherein while a first bag is being tamped, a second bag is substantially simultaneously being opened by said at least one bag opening mechanism.

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17. The system according to claim 1, further comprising a motor and a belt that drive the at least one of said first plurality of rollers.

5 18. The system according to claim 1, further comprising a controller that associates at least one of a pharmaceutical container and a literature package corresponding to a prescription order with the bag label.

10 19. The system according to claim 1, further comprising a robotic mechanism that places the pharmaceutical container in the bag.

20. A system that places a label on a bag, comprising:
a first dancer assembly that receives and conveys a bag
film comprising a plurality of bags, each of the
bags separated by a perforation, said first dancer
5 assembly defining an area through which the bags are
conveyed;
a printer for printing a plurality of labels disposed
on a backing material;
a second dancer assembly that conveys the plurality of
10 labels and the backing material, said second dancer
assembly defining an area through which the
plurality of labels and the backing material are
conveyed;
a tamp that receives at least one printed label;
15 a control system that associates at least one of a
pharmaceutical container and a literature package
corresponding to a prescription order with the
label; and
a sensor system disposed to sense a first position of
20 the bag with respect to said tamp to facilitate said
tamp placing the printed label on the bag responsive
to the first position determined by said sensor
system.

21 The system according to claim 20, further
comprising:

at least one bag opening mechanism movably mounted to
open the bag subsequent to labeling; and

5 a seal bar assembly comprising a heater element and a
seal bar to seal the bag.

22. The system according to claim 21, wherein said at
least one bag opening mechanism comprises a first sensor
10 to determine whether a bag is in position for opening.

23. The system according to claim 21, further
comprising a second sensor for detecting a position of a
perforation between the bag and a second bag.

15 24. The system according to claim 23, wherein the
perforation position is used to convey the bag a
predetermined amount in a first direction to said seal
bar assembly.

20 25. The system according to claim 23, wherein said seal
bar moves toward the bag to seal the bag.

26. The system according to claim 21, wherein at least a portion of said first dancer assembly rotates in a second direction subsequent to sealing the bag to break a perforation between the bag and a second bag.

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27. The system according to claim 20, further comprising a roller that facilitates selective removal of printed labels from the backing material when the backing material rotates about the roller.

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28. The system according to claim 27, wherein a surface of said tamp comprises a plurality of vacuum holes that facilitate maintaining the label on the surface prior to placing the printed label on the bag.

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29. The system according to claim 20, wherein a surface of said tamp comprises a plurality of vacuum holes that facilitate maintaining the label on the surface prior to placing the printed label on the bag.

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30. The system according to claim 20, wherein said second dancer assembly comprising a roller under a biasing force, said roller moving dynamically as labels are received by said printer.

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31. The system according to claim 30, further comprising a spring, wherein said spring provides the biasing force.

5 32. The system according to claim 30, further comprising a cam that moves in concert with the roller under the biasing force.

10 33. The system according to claim 32, further comprising:

 a switch that is engaged by said cam; and
 a label roll, wherein when said switch is engaged by said cam, labels are dispensed from said label roll.

15 34. The system according to claim 32, wherein at least a portion of said second dancer assembly comprises said label roll.

20 35. The system according to claim 20, wherein said first dancer assembly comprises a plurality of rollers.

25 36. The system according to claim 35, further comprising a motor and belt that drive at least one of said plurality of rollers.

37. A method for filling a plurality of prescription orders, comprising the steps of:

5 transporting in a first direction a bag film comprising
a plurality of bags;
transporting in the first direction a plurality of
labels disposed on a backing sheet;
printing on a label for each of the plurality of bags,
the name and address information of a recipient of a
10 prescription order;
placing a label on the plurality of bags from the bag
film, one bag at a time, when the plurality of bags
reach a predetermined position;
opening the labeled bags; and
15 placing in the opened bag a pharmaceutical container
with enclosed pharmaceuticals, corresponding to a
prescription order associated with the bag label.

38. The method according to claim 37, further
20 comprising the step of discarding a bag that cannot be
opened.

39. The method according to claim 37, further
comprising the step of placing a literature pack in the
25 opened bag.

40. The method according to claim 39, further comprising the step of sealing the opened bag.

41. The method according to claim 37, further
5 comprising the step of sealing the opened bag.

42. The method according to claim 37, further comprising the step of conveying the bag a predetermined amount in the first direction to a position where the bag
10 is opened, responsive to the perforation position.

43. The method according to claim 42, further comprising the step of sensing whether a bag is in position for opening.
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44. The method according to claim 37, further comprising the step sensing whether a bag is in position for opening.

20 45. The method according to claim 40, further comprising the step of transporting the bag film in a second direction subsequent to sealing the bag to break a perforation between the bag and a second bag.

46. The method according to claim 37, further comprising the step of separating a label from the backing sheet prior to said placing step.

5 47. The method according to claim 46, further comprising the step of providing a vacuum to hold the label in place prior to placing the label on the bag.

10 48. The method according to claim 37, further comprising the step of providing a vacuum to hold a label in place prior to placing the label on the plurality of bags.

15 49. The method according to claim 37, further comprising the step of placing a label on a first bag substantially simultaneously while opening a second bag having a label placed thereon.

50. A system that places a label on a bag, comprising:
means for contacting a bag film comprising a plurality
of bags, each of the bags delimited by a
perforation, said contacting means defining an area
5 through which the bag film is conveyed, and rotating
in concert in a first direction to convey the bag
film, at least a portion of said contacting means
being driven to convey the bag film;
a printer for printing a plurality of labels disposed
10 on a backing material;
means for contacting the plurality of labels and the
backing material, said label contacting means
defining an area through which the plurality of
labels and the backing material are conveyed, at
15 least a portion of said label contacting means
rotating in concert to convey the plurality of
labels and the backing material for indicia to be
printed thereon; and
a label removal and tamp mechanism that receives at
20 least one printed label, selectively removes the
printed label from the backing material and places
the printed label on the bag.

51. A system that places a label on a bag, comprising:
means for receiving and conveying a bag film comprising
a plurality of bags, each of the bags separated by a
perforation, said receiving and conveying means
5 defining an area through which the bags are
conveyed;
a printer for printing a plurality of labels disposed
on a backing material;
label conveying means for conveying the plurality of
10 labels and the backing material, said label
conveying means defining an area through which the
plurality of labels and the backing material are
conveyed;
a tamp that receives at least one printed label;
15 a control system that associates at least one of a
pharmaceutical container and a literature package
corresponding to a prescription order with the
label; and
a sensor system disposed to sense a first position of
20 the bag with respect to said tamp to facilitate said
tamp placing the printed label on the bag responsive
to the first position determined by said sensor
system.